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*Pediatrics* 2006;117:2055-2064

DOI: 10.1542/peds.2005-2204

The online version of this article, along with updated information and services, is located on the World Wide Web at:

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# Attitudes Predict the Use of Physical Punishment: A Prospective Study of the Emergence of Disciplinary Practices

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The authors have indicated they have no financial relationships relevant to this article to disclose.

## ABSTRACT

**OBJECTIVE.** We sought to track the emergence of discipline techniques by mothers of young children and assess the predictive validity of spanking attitudes with subsequent reports of spanking.

**METHODS.** One hundred thirty-two mothers were surveyed every 6 months (beginning when their child was 12 months old until they were 4 years old) regarding how they disciplined their children. The discipline behaviors measured included physical punishment, noncoercive methods, and the use of time-outs and withdrawal of privileges. Attitudes toward spanking also were assessed several times.

**RESULTS.** When their infants were 12 months old, mothers reported using 10 of the 12 discipline techniques assessed, and by the time the children were 24 months old, most mothers reported widespread use of the techniques. The frequency of use increased with age. Although the use of some discipline methods changed as the children got older, the mothers showed significant stability in their overall discipline strategy. Attitudes toward spanking (assessed when their children were 6 months old) were significantly correlated with subsequent spanking behavior, and the mothers' attitudes showed stability over time as well.

**CONCLUSIONS.** By the time infants are 12 months old, discipline is a frequent occurrence in many families. A variety of techniques are used, and attitudes toward spanking predict subsequent spanking behavior. This information is useful for pediatricians, because it provides parents with anticipatory guidance about disciplining young children.

[www.pediatrics.org/cgi/doi/10.1542/peds.2005-2204](http://www.pediatrics.org/cgi/doi/10.1542/peds.2005-2204)

doi:10.1542/peds.2005-2204

### Key Words

discipline, spanking, prospective study, parenting, parental attitudes

### Abbreviations

SES—socioeconomic status

ATS—attitudes toward spanking

PRCM—Parental Response to Child

Misbehavior questionnaire

Accepted for publication Nov 4, 2005

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**D**ESPITE THE IMPORTANCE of parental discipline for such child outcomes as moral development, emotional health, and child abuse,<sup>1</sup> few authors<sup>2,3</sup> have examined the emergence of discipline in the first few years of a child's life. Disciplinary practices may begin much earlier than recognized by most researchers, and problematic interaction patterns can become established within the first few years of a child's life.<sup>4,5</sup> For example, Regalado et al<sup>6</sup> found that by time a child is 18 months of age, 76% of parents admitted to yelling at their children, and 29% admitted to spanking at least "rarely." Information about the onset of particular discipline practices may provide pediatricians and other professionals with useful knowledge for instructing parents.

In contrast to the limited information about discipline in the first few years of life, more is known about discipline with preschoolers (aged 3–6 years) and older children.<sup>7–9</sup> However, much of the available research on child discipline has focused on corporal punishment. Somewhere between 70% and 94% of US parents spank, a practice that is most frequent when the child is 3 to 5 years old.<sup>5,10–12</sup> For example, Day et al<sup>4</sup> measured spanking frequencies among parents of children aged 1 to 11 years. These authors found that younger children (<7 years) are spanked more frequently than older children; boys are spanked more than girls; and parent attributes such as age, education, and religious orientation are associated with the parents' likelihood to spank. Jackson et al<sup>13</sup> also found that younger children were more likely to be spanked, as were children whose parents had lower levels of education and had positive attitudes toward physical discipline.

However, little systematic research has been conducted to determine when parents start spanking and the context in which spanking is used in conjunction with other discipline methods. The evidence available indicates that physical punishment begins early: between 29% and 50% of parents report spanking when their child is 12 months old.<sup>4,6,14</sup> However, little is known

about other manifestations of physical punishment such as slapping a child's hand or face and their associations with spanking on the bottom. Contextual information about spanking, such as preceding, concurrent, and antecedent behaviors on the part of the parent, is also largely missing from the literature.<sup>15</sup>

Identifying the determinants of disciplinary practices is a central issue for effective counseling and intervention. Some of the key determinants can be divided into distal and proximal ones. Distal determinants include such variables as nationality, race/ethnicity, and socioeconomic status (SES). SES has frequently been related to the use of physical punishment.<sup>5</sup> Parents with less education and lower income spank more than parents of higher SES.<sup>10,13,16–18</sup> With regard to physical punishment, the most commonly identified proximal determinant has been parental attitudes, which typically derive from how the parent was raised. Several studies have found that parents' child-rearing attitudes and beliefs were indeed significant predictors of their reported use of corporal punishment,<sup>2,13,19–21</sup> but almost all of these studies looked at physical punishment during the preschool period (ie, ages 3–6). It is unknown whether attitudes predict earlier onset of spanking.

Another question regarding physical punishment is whether parents who use it do so in the way advised by spanking advocates. Despite the widespread discouragement of use from many pediatricians, psychologists, and others,<sup>11,15,22–24</sup> there are some individuals who advise parents to spank as an appropriate and necessary child-rearing technique.<sup>25–28</sup> However, there is considerable variability in their recommendations. For a comparison of 4 prospanking views on 6 dimensions, see Table 1. In light of differing views on whether and how to spank a child, we sought to investigate the correspondence between the published recommendations concerning use of physical discipline and parents' own reports of spanking.

In sum, the current exploratory study was built

**TABLE 1 Recommended Ways to Spank a Child**

Author (Year)	Child Age	Place	Method	Emotion	First or Last	Frequency
Dobson <sup>25</sup> (2004)	15 mo to 12 y	In private	With a switch or paddle on buttocks; should cause pain	Do not spank while angry	Vary responses to misbehavior	Infrequent; use when child is most defiant
Larzelere and Merenda <sup>26</sup> (1994)	2 to 6 y	NA	Two open-handed swats to buttocks; should leave no marks	Do not spank while angry or too emotional	Use as last resort; try other methods first	Infrequent; focus on few targeted misbehaviors
Rosemond <sup>27</sup> (1994)	18 mo to 10 y	In private	Two open-handed swats to buttocks; should not cause pain	Spank in anger	Use as first resort and pair with other methods	Infrequent
Trumbull and Ravenel <sup>28</sup> (1996)	18 mo to 10 y	In private	1–2 open-handed swats to buttocks	Do not spank while angry or too emotional	Use as last resort; try other methods first	Infrequent; use when child is most defiant

NA indicates not applicable.

around 3 goals. The first goal was to examine the emergence of discipline within families over time. Toward that end, we investigated mothers' reports of use of common disciplinary techniques including reasoning, diverting, negotiating, and using time-outs. Given the current research interest in physical punishment, we sampled 4 types of physical punishment: spanking with the hand, spanking with an object, slapping the child's hand, and slapping the child's face. No specific hypotheses were made about the emergence of the techniques. The second goal was to assess the predictive validity of a particular attitude with a subsequent behavior. Specifically, we hypothesized that parental attitudes toward spanking when their children were infants would predict their future use of physical punishment, and we expected positive attitudes toward spanking to be associated with earlier emergence of the behavior. The third goal was to collect contextual information about spanking incidents, such as mothers' behavior before, during, and after the bout, to examine whether mothers who spanked were following the prospankers' recommendations.

## METHODS

### Sample

A total of 156 parents participated in the initial assessment (time 1), which was begun when their children were 6 months old. Participants were recruited from a database of birth records kept at a university research laboratory. This database is based on birth announcements from the local newspaper, as well as recruiting efforts by the research laboratory to add local parents to the database. At the initial visit, parents were invited to participate in a longitudinal study, which required participation every 6 months through their child's fourth birthday. A total of 147 parents agreed to continue participation; of these, 132 were mothers and 15 were fathers and the husbands of female participants. Because of the low number of fathers recruited and the fact that their spouses also participated, fathers' data were excluded from the analyses. Over the 3½-year duration of the study, contact was lost with several mothers because they either moved and did not leave a forwarding address or chose to stop participating. At 24 months, 125 mothers participated, 96 mothers participated at 36 months, and at the end of the study, 115 mothers (87% of the initial sample of mothers) remained in the study.

The participants all lived in a major Southwestern metropolitan area. The mothers' ages at the birth of their participating child ranged from 20 to 44 years (mean: 31.4). Forty-seven percent had a male focal child. The majority of the participants (98%) came from 2-parent families, and most families had 1 or 2 children (mean: 1.5; range: 1–5). Mothers reported a wide range of family income: 9% of the sample had an annual family

income of less than \$30 000, but 50% reported an annual income of more than \$60 000. Seventy-nine percent of the mothers had earned college degrees. The racial/ethnic makeup of the sample was 85% white, 10% Mexican American, and 4% Asian American. These demographic characteristics are listed in Table 2.

All data were collected in compliance with the University of Texas Institutional Review Board.

### Measures

The Attitudes Toward Spanking (ATS) questionnaire<sup>20</sup> was used to measure maternal attitudes. The ATS questionnaire measures attitudes toward spanking on a 7-point agree-disagree Likert-type scale that yields 1 summary score. The 10-item survey involves rating 10 statements about spanking, including "Sometimes a spank is the best way to get my child to listen"; "A spank is not an effective method to change my child's behavior long-term"; and "It is a parent's right to spank." The survey has good psychometric properties. The internal consistency was high: Cronbach's coefficient  $\alpha$  values were .88 for the mothers at time 1, and it remained high when measured at the children's second and third birthdays (.90 and .89, respectively). The 2-week test-retest reliability of the original instrument was 0.76, and attitudes correlated 0.55 with daily reports of spanking.<sup>20</sup>

To measure disciplinary behavior at various time points, the mothers filled out the Parental Response to Child Misbehavior questionnaire (PRCM).<sup>20</sup> The PRCM is a 12-item behavioral report of the frequency with which parents have made use of various disciplinary

**TABLE 2 Demographic Characteristics of Participants (N = 132)**

Mothers' age at time 1, y	
Range	20–44
Mean (SD)	31.4 (4.5)
No. of children per household	
Range	1–5
Mean (SD)	1.5 (0.7)
Child's gender, %	
Boys	47
Girls	53
Mother's education, %	
High school or less	4
Some college	17
4-y college degree	59
Graduate/professional degree	20
Family annual income, %	
Below \$15 000	1
\$15 000–\$30 000	8
\$30 000–\$60 000	42
Above \$60 000	49
Mothers' marital status, %	
Single/divorced	2
Married/living with partner	98
Mother's race, %	
White	85
Mexican American	10
Asian American	4

methods in the past week. Behaviors included are reasoning, diversion, negotiation, threatening, using time-outs, spanking with hand, spanking with object, ignoring, withdrawing privileges, yelling in anger, slapping hand, and slapping face. Frequency choices included 0 (never), 1 (<1 time per week), 2 (1–2 times per week), 3 (3–4 times per week), 4 (5–6 times per week), 5 (7–8 times per week), and 6 ( $\geq 9$  times per week). The 3-week test-retest reliability of the original instrument was reported to average .64.<sup>29</sup>

To collect information about the context of spanking, a new, brief survey was included. This questionnaire, which was based on pilot interviews with mothers, consisted of 17 items divided into 3 sections: “before,” “during,” and “soon after.” Questions concerned such contextual information as whether the parent warned of the upcoming spanking, how the parent felt before, during, and after the spanking (eg, angry, guilty, calm, etc), whether a reason was provided to the child during the spanking, and how many times the child was struck during a spanking. Each section also had an “other” option, and at the end of the survey, blank lines were included for writing additional contextual comments.

### Procedure

During the initial visit, parents came to a university research laboratory where they were given a description of the study and signed an informed consent form. They then were given the ATS questionnaire and a basic demographic survey. After this initial visit, they were contacted by mail every 6 months through the child’s fourth birthday. The PRCM was mailed to each participant along with a stamped return envelope. At the 24- and 36-month mailings, the ATS questionnaire was included in the packet to a subset of the mothers to assess possible changes in spanking attitudes.

### Data Analysis

Because of missing data at various time points, data were collapsed into four 12-month periods. Thus, data from 18 months were combined with the 24-month data, 30 months with the 36-month data, and 42 months with the 48-month data. For example, if there were no data from the 24-month questionnaire, the data from the 18-month questionnaire were used. For cases in which there were data from both time periods, the scores were averaged.

## RESULTS

### The Emergence of Discipline

The mothers reported engaging in a variety of disciplinary techniques by the time their infants were 12 months of age. In fact, 10 of the 12 techniques sampled were reported to be used by at least 12% of the mothers. The most commonly used techniques were diverting (reportedly used by 100% of the mothers), reasoning (85%), ignoring (64%), and negotiating (50%). On average, the mothers reported diverting their children more than once per day (mean: 5.49; “7–8 times per week”) and reasoning 3 to 4 times per week (mean: 3.66) with their 12-month-old children. Two forms of physical punishment had emerged by this age. Twenty-one percent of the mothers reported slapping their child’s hand (on average once or twice per week [mean: 2.12]), and 14% reported spanking their infants (on average once per week [mean: 1.67]). In addition, more than one third of the mothers revealed that they yelled at their child in anger (on average once per week [mean: 1.65]). Table 3 lists the percentage of the mothers who reported using various discipline methods at each age point and the mean frequency per week.

Not surprisingly, over the next 3 years, there were dramatic increases in the percentage of the mothers

**TABLE 3 Mothers Who Reported Using Each Disciplinary Method at the 4 Assessment Points**

	12 mo (N = 129)		24 mo (N = 125)		36 mo (N = 96)		48 mo (N = 115)		Frequency Change Over Time	
	% (n)	Mean (SD)	% (n)	Mean (SD)	% (n)	Mean (SD)	% (n)	Mean (SD)	F	P
Spank with hand	14 (18)	1.67 (0.84)	45 (56)	1.63 (0.95)	55 (53)	1.62 (0.95)	59 (68)	1.41 (0.83)	$F_{3,84} = 17.08$	<.01
Spank with object	0	NA	3 (4)	1.67 (0.58)	10 (9)	2.67 (1.66)	8 (9)	1.00 (0.0)	$F_{3,62} = 4.08$	<.05
Slap child’s hand	21 (26)	2.12 (1.21)	31 (38)	1.50 (0.76)	29 (27)	1.19 (0.48)	15 (17)	1.24 (0.44)	$F_{3,77} = 4.95$	<.05
Slap child’s face	0	NA	4 (5)	1.00 (0.0)	3 (3)	1.00 (0.0)	2 (3)	1.00 (0.0)	$F_{3,78} = 1.65$	>.05
Yell in anger	36 (46)	1.65 (0.77)	81 (100)	1.91 (1.17)	87 (83)	2.34 (1.35)	93 (106)	2.35 (1.45)	$F_{3,82} = 44.13$	<.01
Threaten	19 (24)	1.67 (1.05)	63 (89)	2.38 (1.48)	86 (83)	3.16 (1.60)	90 (103)	3.02 (1.48)	$F_{3,84} = 85.74$	<.01
Withdraw privileges	18 (23)	1.61 (0.72)	52 (64)	1.95 (1.16)	91 (87)	2.13 (1.03)	93 (106)	2.27 (1.22)	$F_{3,83} = 59.63$	<.01
Time-outs	12 (16)	1.56 (1.09)	60 (75)	2.36 (1.48)	88 (84)	2.73 (1.49)	96 (109)	2.28 (1.22)	$F_{3,83} = 68.33$	<.01
Reasoning	85 (109)	3.66 (1.77)	100 (125)	4.75 (1.45)	100 (96)	5.08 (1.17)	100 (115)	5.01 (1.11)	$F_{3,84} = 40.39$	<.01
Diversion	100 (129)	5.49 (0.97)	100 (125)	4.73 (1.24)	100 (96)	4.23 (1.39)	96 (110)	3.64 (1.64)	$F_{3,85} = 50.78$	<.01
Negotiate	50 (64)	2.76 (1.66)	90 (112)	3.34 (1.56)	100 (96)	3.48 (1.68)	95 (107)	3.42 (1.51)	$F_{3,80} = 42.78$	<.01
Ignore	64 (82)	2.29 (1.25)	90 (112)	2.50 (1.34)	92 (87)	2.36 (1.32)	84 (96)	2.15 (1.21)	$F_{3,83} = 9.84$	<.01
Total discipline	13.44 (2–33) <sup>a</sup>		21.60 (7–37) <sup>a</sup>		25.47 (10–40) <sup>a</sup>		26.20 (7–49) <sup>a</sup>			

Scores on the PRCM were coded as: 0, never; 1, <1 time per week; 2, 1 to 2 times per week; 3, 3 to 4 times; 4, 5 to 6 times; 5, 7 to 8 times; 6,  $\geq 9$  times. NA indicates not applicable.

<sup>a</sup> Values are mean (range).

reporting that they used the different discipline methods. The use of most methods increased each year through the child's fourth birthday. However, ignoring and slapping the child's hand were used by fewer mothers and less frequently by the fourth year, and spanking with an object and slapping the child's face were used by relatively few parents overall. Spanking and yelling peaked in the fourth year. Fifty-nine percent of mothers reported spanking (on average once per week [mean: 1.41]), and 93% reported yelling at their child (on average a couple of times per week [mean: 2.35]). Reasoning was reportedly used by all mothers when the children were 2, 3, and 4 years old; however, the frequency of reported use increased over time. By the child's fourth birthday, parents reported reasoning with their children an average of 7 to 8 times per week. Diverting was at ceiling level in that all parents reported using it through their child's fourth birthday; however, the frequency with which parents used it declined as the child got older. Descriptive statistics are listed in Table 3.

Figure 1 depicts the reported use of 5 disciplinary responses that illustrate several common patterns of response trajectory. As can be seen, yelling and using time-outs both increased in frequency and became almost as frequent as the use of reasoning by the time the child was 3 years old. Slapping the children's hands peaked around 2 to 3 years but remained at a lower frequency than the other disciplinary methods, and it dropped to very low levels by the time the children reached 4 years of age. Figure 2 depicts the frequencies with which parents reported using the same 5 disciplinary methods. As can be seen, reasoning was not only one of the most common discipline methods (see Fig 1), but it was also reportedly used more frequently each week than the other methods. Using time-outs was used more frequently as the child grew older, as was yelling. However, although spanking was used by more parents over time, the weekly frequency of use remained fairly stable.

Of special interest was the onset and manifestations of physical punishment. Of the 4 types of physical-punishment responses assessed, the most common manifestation was spanking with the hand. A majority of the

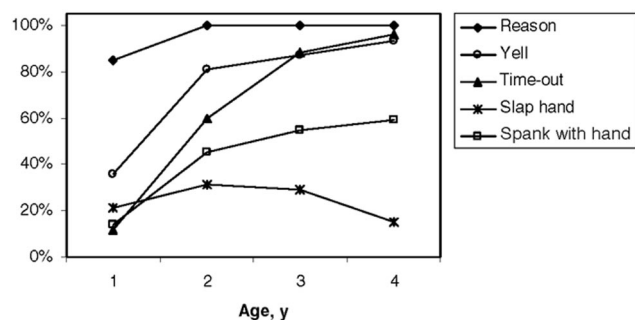


FIGURE 1  
Percent of mothers using 5 disciplinary methods across child's age.

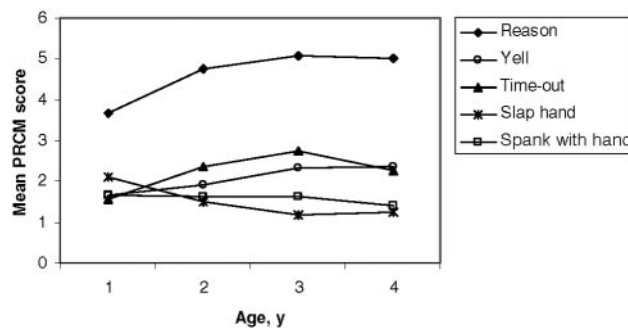


FIGURE 2  
Reported frequency of use of 5 disciplinary methods across child's age.

mothers reported doing so at  $\geq 1$  time periods. The practice was most widely used at 48 months, when 59% of the mothers reported spanking. In contrast, it was used most frequently by the mothers who spanked at 24 and 36 months. Spanking with an object was not commonly practiced in this sample; at its apex at 36 months, only 10% of the mothers reported doing so. Slapping the child's hand was a technique reported by almost one third of the mothers (31% at 24 months), but by 48 months only 15% of the mothers reported that they occasionally did it.

#### Stability and Change in Individual Disciplinary Responses

Significant year-to-year stability was found for all of the discipline methods. Reasoning, diverting, negotiating, spanking with the hand, ignoring, yelling, and slapping the child's hand were significantly correlated at each age point, with median correlations ranging from a high of 0.51 (yelling) to a low of 0.28 (reasoning). Threatening, using time-outs, spanking with an object, withdrawing privileges, and slapping the child's face were significantly correlated at all age points except 12 months.

Despite the stability revealed by correlations, there was also significant change when the disciplinary techniques were submitted to a 12 (discipline method)  $\times$  4 (time) repeated measures analysis of variance. The frequency of reported use of the discipline methods changed significantly over time ( $F_{33,96} = 22.24; P < .01$ ).

To form an index of the total amount of discipline used, the frequency scores on the PRCM were added at each age point. As can be seen in Table 3, parents reportedly used significantly less discipline overall when their children were 12 months old (mean: 13.44) compared with when the children were 48 months old (mean: 26.20) ( $F_{1,110} = 194.0; P < .001$ ).

#### Attitudes Toward Spanking and Its Correlates

The second focal question of this study concerned whether attitudes about spanking predicted subsequent spanking behavior. At each of the 4 time periods assessed, maternal attitude toward spanking (measured when their children were 6 months old) was found to be

significantly correlated with reports of spanking with the hand. Correlations ranged from a low of  $r_{128} = 0.21$  ( $P < .05$ ) when the child was 12 months to a high of  $r_{115} = 0.50$  ( $P < .01$ ) at 48 months. At 24 months, the correlation was  $r_{125} = 0.47$  ( $P < .01$ ), and at 36 months it was  $r_{96} = 0.42$  ( $P < .01$ ). Similarly, attitude toward spanking was also significantly correlated with the mothers' use of spanking with an object at 36 months ( $r_{90} = 0.37$ ;  $P < .01$ ) and 48 months ( $r_{111} = 0.22$ ;  $P < .05$ ) but not at 24 months ( $r_{122} = -0.02$ ;  $P > .05$ ).

ATS showed considerable stability across the 3½ years on the basis of a subsample of the mothers. Maternal attitudes (assessed when their infants were 6 months old) were highly correlated with their attitudes when their children were 24 ( $r_{46} = 0.79$ ;  $P < .01$ ) and 36 ( $r_{58} = 0.76$ ;  $P < .01$ ) months old. In addition, attitudes about spanking were significantly correlated between the 24- and 36-month assessments ( $r_{46} = 0.76$ ;  $P < .01$ ).

### Context of the Spanking Event

The mothers who used physical punishment were asked to provide additional information about the context of the spanking incidents, including their preceding, concurrent, and antecedent behavior. Twenty-eight mothers provided this information at 12 months (including all of the mothers who reported spanking), 47 (84% of the spankers) filled it out at 24 months, and 50 (94% of the spankers) filled it out at 36 months. Those data revealed several interesting contextual features of these disciplinary encounters. Before spanking, most of the mothers (82% of the mothers across time) reported that they first tried other disciplinary techniques. As one mother of a 24-month-old wrote: "I only spank when all

other options don't work." Warnings of impending spankings increased with age. By the time their children reached 24 months of age, 85% of the mothers indicated that they would warn the child about the imminent spanking, a substantial increase from the 57% who reported that they would warn at 12 months of age.

Most of the mothers (72%) reported that they hit their child's bottom only 1 time per spanking incident, another 26% revealed that they struck 2 or 3 times, and the remaining 2% (4 mothers at 36 months) admitted that they had hit their child  $\geq 4$  times during a spanking incident. With regard to emotion-related questions, at least three fourths of the mothers at each age period reported that they would try to keep calm during the discipline bout. Half of the mothers reported that they did indeed remain calm, but one third of the mothers at 24 and 36 months revealed that they felt angry during the bout. Most of the mothers reported that they would also express affection after the bout by hugging (74%) or telling the child they love him or her (71%). Almost none of the mothers reported that they would stay angry, but by an increasing percentage over time (up to 40% at 36 months) the mothers revealed that they would feel badly after the episode. Shortly after the bout, all (at 36 months) or almost all (at 24 months) of the mothers reported that they would explain why they had spanked, a considerable increase from the 71% who reported doing so at 12 months. Table 4 lists the percentages of mothers reporting their behaviors and emotions before, during, and after a spanking incident.

The mothers were also given an opportunity to write additional comments about their use of spanking. The most prominent theme was doubts about its effective-

**TABLE 4** Percent of Mothers Reporting Behaviors Before, During, and Shortly After Spanking Their Child

	12 mo (n = 28)	24 mo (n = 47)	36 mo (n = 50)	Overall
<b>Beforehand</b>				
Try other methods first	86	83	80	82
Warn you will spank	57	85	86	79
Try to keep calm	75	81	76	78
Do not give warning	4	9	8	7
Other	18	13	12	14
<b>During</b>				
Spank only once	68	79	68	72
Spank 2 to 3 times	21	19	34	26
Spank $\geq 4$ times	0	0	2	1
Remain calm	61	47	46	50
Explain while spanking	43	45	46	45
Feel angry	4	34	38	29
Do not say anything	14	17	24	19
Other	14	4	8	8
<b>Shortly after</b>				
Explain why spanked	71	94	100	91
Hug your child	68	83	68	74
Tell child "I love you"	64	70	76	71
Stay angry with child	4	4	0	2
Feel bad	21	36	40	31
Other	18	2	8	8

ness. As a mother of a 24-month-old recognized: "I tend to spank out of anger when [my son] refuses to cooperate or does not respond to other discipline tactics, [but] spanking is not effective and I do not advocate it." Another mother wrote: "I use spanking as a last resort. I'm beginning to question the effectiveness of spanking, because sometimes the child's behavior doesn't change and he continues misbehaving. Second, when [he] gets very angry and frustrated, he will hit me or other children, so maybe spanking is teaching him that hitting is okay." A second theme was that spankings occurred when the child, or the mother, lost control. One mother reserved spanking for when her daughter was "openly defiant and/or screaming and yelling at me uncontrollably." But several mothers admitted they spanked only when they themselves had lost control. As 3 mothers acknowledged: "It's a last resort when we're both out of control"; "I consider spanking to be a sign that I have lost control ... It's not a way to gain a child's control"; and "Spanking is almost always done in anger and I regret it immediately. It's when I have lost my temper."

## DISCUSSION

This study makes 3 contributions to the literature concerning parental use of discipline. First, as these data make clear, the onset of discipline emerges early in parenting. Only 12 months after their child's birth, mothers reported that they were engaging in a variety of forms of discipline. Initially, the method of choice was diverting, but it was accompanied by other methods, most commonly reasoning and negotiating. That mothers report using these methods with such young children has only previously been documented by few researchers,<sup>2,3</sup> and it indicates that many mothers are relying on cognitive control methods with their infants and toddlers.

The most precipitous increase in discipline, as indexed by the percentage of mothers reporting its use and the frequency of use, occurred between child age 12 and 24 months. Not including physical punishment, at least 60% of the mothers reported using 7 of 8 techniques when their children were 2 years old. The noncoercive methods, such as reasoning and diverting, were used most frequently across all ages, with 85% to 100% of mothers reporting that they reasoned with their children and 96% to 100% reporting that they diverted their children. Withdrawal of privileges lagged behind in terms of use, but by 36 months, 91% of the mothers reported using it. These data indicate that parents of children as young as 12 months of age are engaging in frequent verbal control techniques including negotiating, reasoning, diverting, and ignoring. It was surprising to us that the mothers reported such high rates of reasoning. Eighty-five percent of mothers reported reasoning with their 12-month-old child, and by the time their children were 24 months old, all mothers reported rea-

soning. Based on these data, it seems that mothers have somewhat unrealistic expectations about their children's cognitive abilities and the effectiveness of reasoning at such a young age. Additional investigations into this topic should look at the reasons that mothers give for using this technique at such an early age, as well as its effectiveness. In addition, it is worthwhile to look at the content within which the reasoning occurs, such as whether it is used in isolation or in combination with other discipline methods. Mothers may use reasoning to justify (not only to the child but also to themselves or a spouse) the use of another discipline method. Future research should also look at the way reasoning is used across time, because the type of reasoning may change as the child gets older.

In addition to the above-mentioned changes in disciplinary techniques over the first few years of life, the data also revealed a picture of stability in use of discipline.<sup>30</sup> Stability was found in the significant correlations for discipline methods over the 4-year period. The median correlations across years ranged from 0.22 to 0.51, with spanking and yelling showing especially high stability. Thus, parents seem to decide very early which discipline methods to use with their children and continue to use these methods year to year.

A second contribution of this study concerns the link between attitudes and behavior.<sup>31</sup> Significant correlations were found with spanking attitude (assessed when their children were just 6 months old) and spanking behavior at each of the 4 ages. The correlation attained its highest value at child age 48 months ( $r = 0.50$ ), although the values at 24 ( $r = 0.47$ ) and 36 ( $r = 0.42$ ) months were highly significant as well. These correlations provide evidence that spanking often has an instrumental basis and that adults already may have formed specific attitudes toward spanking early in parenthood. More generally, this finding of the attitude-behavior link supports the contention by Holden and Edwards<sup>32</sup> that if attitudes toward a specific child-rearing practice are assessed, rather than global decontextualized attitudes, significant attitude-behavior links can be found. The magnitude of the correlations may be limited because of the likelihood that some parents are "emotional spankers"<sup>20</sup> and may not have had positive attitudes about the practice. Support for this was found in some of the comments mothers provided regarding the context of their use of corporal punishment. A common theme of these comments was that spanking occurred when the mother was angry or had lost control. In addition, several mothers doubted the effectiveness of spanking. This trend is similar to the results of another study<sup>33</sup> in which it was found that parents who reported spanking frequently acknowledged that it was not the best method.

The third contribution of this study is that it better revealed the nature of maternal discipline with young

children. In this particular sample, spanking with the hand was associated with slapping the child's hand, but the latter practice was not as common and neither were closely linked to spanking with an object or slapping the child's face. One disciplinary response that was associated with spanking was yelling in anger. Correlations ranged from a low of 0.11 at 24 months to a high of 0.47 at 36 months. By the time their children were 12 months old, more than one third of the mothers reported yelling at them. Twelve months later, that percentage rose to 81% and continued to rise over the course of the study. At the final data-collection period, 93% of the mothers admitted to yelling at their children an average of 2 times per week. Yelling at children has received very little attention, but several researchers such as Straus and Field<sup>34</sup> have argued that the practice could be tantamount to psychological maltreatment. Evidently, investigations are needed to assess the content of the yelling and how children are responding. At the present, one can only conclude that it is a common occurrence in these families.

The contextual information collected provides unique data with which to compare maternal practices with advice about how to apply physical punishment. Despite recommendations from many pediatricians,<sup>22,35</sup> researchers,<sup>11,15,36</sup> and parenting experts<sup>23,24,37</sup> to refrain from spanking, most parents continue to rely on corporal punishment. In the present study, 59% of the mothers reported spanking, which is somewhat less than what has been found in nationally representative samples.<sup>11</sup> This is likely because of the higher SES of the mothers in this sample.<sup>13,16</sup> Nevertheless, there were enough spankers to allow for a comparison of mothers' reports of their spanking practices and the recommendations of several researchers and authors of parenting books about how to spank.<sup>25-28</sup> We compared reports with published recommendations on 5 criteria: (1) at what age spanking should begin; (2) how many times a child should be swatted during an incident; (3) whether a parent should spank with the hand or an object; (4) whether parents should spank in anger; and (5) whether physical punishment should be used as a first or last resort.

All of the prospanking authors were in accord that children <18 months of age should not be spanked. However, 14% of the mothers in our study reported that they were already spanking their 12-month-old children, and 21% reported slapping their child's hand. By the time their children were 24 months old, almost half of the mothers (45%) reported spanking, and approximately one third (31%) indicated that they were slapping hands. Correspondence between reports and recommendations was higher with the number of swats used and whether parents should spank with the hand or an object. Most mothers (72%) reported that they spanked only once, whereas an additional 26% reported

spanking 2 to 3 times per incident. Only 1% of the mothers reported hitting  $\geq 4$  times. In addition, only 10% of the mothers reported having spanked their child with an object.

Prospanking authors are not in agreement about the role of emotion in the punishment. Dobson,<sup>25</sup> Larzelere and Merenda,<sup>26</sup> and Trumbull and Ravenel<sup>28</sup> recommend that one should never spank in anger, which is in contrast to Rosemond<sup>27</sup> (see Table 1). Although most of the mothers (78%) reported that they "try to keep calm" before spanking, only 50% reported that they remained calm while they were spanking. Approximately one third (29%) of the mothers admitted that they felt angry while spanking.

A final comparison between recommendations and practices concerned whether parents should use spanking as a first or last resort. Most mothers (82%) reported trying other disciplinary methods first. This is in line with what most of the prospanking authors recommend. However, other researchers who study punishment and learning principles in animals would disagree. According to Domjan,<sup>38</sup> effective punishment requires a strong response-outcome contingency (the punishment must occur after every transgression), a strong response-outcome contiguity (the punishment must happen immediately after the transgression), it should occur without warning, and it should be delivered at high intensity from the beginning (rather than starting with a different or milder form of punishment). The majority (79%) of mothers in our study indicated that they warned before spanking, and as mentioned above, most mothers reported using milder forms of punishment before resorting to corporal punishment. Thus, the research on conditioning and learning indicates that spanking, as practiced by most mothers, is destined to fail as an effective method of discipline.

### Clinical Implications

Pediatricians provide a prime and trusted source of disciplinary advice for parents.<sup>22,35,39</sup> Advice provided after disciplinary practices are well established in the home is unlikely to be successful in changing behavior. These data reveal information about how early in a child's life many disciplinary techniques begin. Given these findings, perhaps pediatricians and others who dispense child-rearing advice need to begin their tutelage sooner than they previously had.

### Limitations

Despite the new information learned from this study, several limitations should be noted. First, the sample consisted only of mothers and was not representative of the population in terms of SES and race or ethnicity. This selectivity does not negate the findings but likely accounts for the lower rates of spanking reported compared with what has been found in larger samples.<sup>10,14</sup>

Evidently, a larger and more representative sample is needed to substantiate these findings. A second limitation is that the data were derived from self-reports, and there was no corroborating source as to whether the mothers actually disciplined their children in the way, or with the frequency, that they reported. No measures of child behavior preceding the discipline were assessed which would have provided a better understanding of the disciplinary incidents. Finally, it is possible that mothers may have misinterpreted some of the discipline labels, although definitions were provided. For example, ignoring could be interpreted as either an effective way to avoid reinforcing misbehavior or an indication of a neglectful caregiver. Future research should expand the nature of the sample to include fathers and more racially diverse parents. However, this study should be considered exploratory, with the results laying the groundwork for larger follow-up investigations.

## CONCLUSIONS

This study provides insight into the emergence and maintenance of disciplinary practices, as well as the capacity of spanking attitudes to predict subsequent spanking behavior. One implication is that if parental use of physical punishment is to be decreased, then attitudes toward spanking should be targeted in parents of infants. At least for physical punishment, the practice is likely based on deep-seated and stable beliefs that may well be transmitted across generations.<sup>40</sup> If parents who were spanked as children were not informed about the problems with the technique of were not given information about appropriate alternatives to corporal punishment. Consequently, this study has implications for pediatricians and others who advise parents on effective discipline.

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#### A WORLD WITHOUT DOCTORS?

“In 1997, John Lantos, a pediatrician and ethicist at the University of Chicago, wrote a book called *Do We Still Need Doctors?* We will always need health care, of course. But, as Lantos observes, it is not clear that we will always need to get our health care from doctors. Many of us already get it from other providers – nurses, physical therapists, clinical psychologists, nutritionists, respiratory therapists, and so on. The figure of ‘the doctor’ is not cast in stone. It is really just a particular configuration of roles and duties and responsibilities, each of which can be changed. Many have already been changed. Sometimes I think of my father as one of the last small-town, solo family doctors left in America. His kind of practice has been largely replaced by teams of specialists working in group practices underwritten by insurance companies and for-profit healthcare chains. I doubt that any of the doctors my family has ever visited, except for a pediatrician who took care of our children when we lived in Montreal, would recognize us if they passed us on the street. Last year, while driving in Wisconsin, I filled up my car at a combination gas station, pharmacy, and walk-in medical clinic. I don’t mean to complain. As long as our health insurance has been paid up, we have usually gotten good care. We simply live in a country that has decided that the traditional figure of the doctor is not worth preserving in the face of modern economics. Instead, we put our trust in the market.”

Elliott C. *Atlantic Monthly*. April 2006

Noted by JFL

**Attitudes Predict the Use of Physical Punishment: A Prospective Study of the Emergence of Disciplinary Practices**

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*Pediatrics* 2006;117:2055-2064

DOI: 10.1542/peds.2005-2204

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